



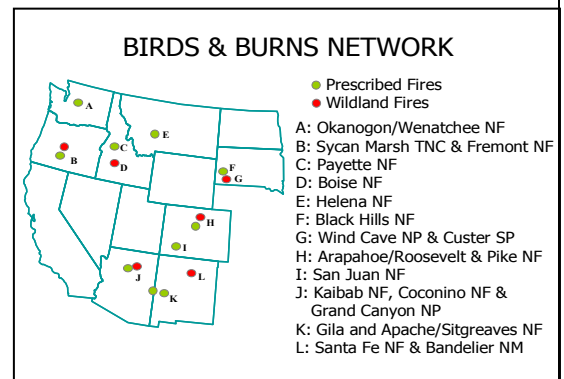
United States Department of Agriculture – Forest Service

Rocky Mountain Research Station



BIRDS AND BURNS NETWORK: Fire Effects on Populations and Habitats of Sensitive Species of Wildlife in Ponderosa Pine Forests of the Interior West

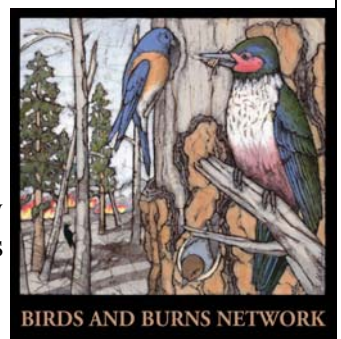
Introduction: The USDA Forest Service Rocky Mountain Research Station (RMRS) is leading the effort to examine fire effects on populations and habitats of wildlife in ponderosa pine forests in eight states across the western United States, including Washington, Oregon, Idaho, and Montana (see map). In cooperation with 14 National Forests, Pacific Northwest Research Station, USGS, NPS, State Agencies, The Nature Conservancy, and several Universities, this research program seeks to characterize bird community response to forest change following wildland or prescribed fire, namely for cavity-nesting species dependent on fire-maintained habitats.



Research Objectives:

- Conduct effectiveness monitoring for prescribed fire to quantify reductions in fuel
- Determine the most productive habitats for cavity-nesting birds among three fire conditions (prescribed fire, wildfire, and fire exclusion)
- Evaluate effects of fuel reductions on habitat and populations of various bird species
- Develop design criteria for post-fire salvage logging that maintains habitat for MIS and sensitive species of Birds
- Develop remote-sensing methods to predict bird distributions and ground vegetation in different habitat conditions created by fire

General Research Approach: At each location, prescribed fire treatment units are 600-1000 acres, and are paired with a control unit of equal extent. We are surveying birds to estimate population sizes, monitoring the nests of all cavity-nesting birds to determine nest densities, nest survival and productivity; and measuring vegetation (e.g., fuels, ground and overstory cover, snag densities) at nest and bird count locations to identify key habitat attributes. These data are collected at least 2 years before prescribed fire treatments and at least 2 years after treatment. Results from ongoing wildfire research are being used to compare habitat and bird populations with those monitored before and after prescribed fire treatments.



Management Implications: Because wildfire and prescribed fire are necessary for the long-term viability of wildlife in the Interior West, managers must strive to understand what their effects might be. This study will help identify the ecological trade-offs of various management options for sensitive species of wildlife, including threatened, endangered, and management-indicator species. This research will also help to identify potential resolutions for conflicts that arise in natural resource management.

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<http://www.rmrs.nau.edu/birdsnburns>

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